



USSN 10-731,875 - Thomas, et al. (9692-000029) Seq. Listing ST25
SEQUENCE LISTING

<110> Applera Corporation
Thomas, Paul
Kejariwal, Anish
Campbell, Michael
Mi, Huaiyu
Diemer, Karen
Guo, Nan
Ladunga, Istvan
Lazareva, Betty
Muruganujan, Anushya
Rabkin, Steven
Vandergriff, Jody
Doremieux, Olivier

<120> Browsible Database For Biological Use

<130> 9692-000029

<140> US 10/731,875

<141> 2003-12-09

<160> 63

<170> PatentIn version 3.2

<210> 1

<211> 62

<212> PRT

<213> Unknown

<220>

<223> Exemplary Protein Sequence.

<400> 1

Leu Ala Val Glu Val Leu Phe Ile Leu Asp Ile Val Leu Asn Phe Arg
1 5 10 15

Thr Thr Phe Val Ser Lys Gly Gln Val Val Phe Ala Pro Lys Ile Cys
20 25 30

Leu His Tyr Val Thr Thr Trp Phe Leu Leu Asp Val Ile Ala Ala Leu
35 40 45

Pro Phe Asp Leu Leu His Ala Lys Val Asn Tyr Phe Gly Ala
50 55 60

<210> 2

<211> 62

<212> PRT

<213> Unknown

<220>

<223> Exemplary Protein Sequence.

<400> 2

Leu Ala Val Glu Val Leu Phe Ile Leu Asp Ile Val Leu Asn Phe Arg
1 5 10 15

Thr Thr Phe Val Ser Lys Gly Gln Val Val Phe Ala Pro Lys Ile Cys
20 25 30

Leu His Tyr Val Thr Thr Trp Phe Leu Leu Asp Val Ile Ala Ala Leu
35 40 45

Pro Phe Asp Leu Leu His Ala Lys Val Asn Tyr Val Gly Ala
50 55 60

<210> 3
<211> 62
<212> PRT
<213> Unknown

<220>
<223> Exemplary Protein Sequence.

<400> 3

Leu Ala Val Glu Val Leu Phe Ile Leu Asp Ile Val Leu Asn Phe Arg
1 5 10 15

Thr Thr Phe Val Ser Lys Gly Gln Val Val Phe Ala Pro Lys Ile Cys
20 25 30

Leu His Tyr Val Thr Thr Trp Phe Leu Leu Asp Val Ile Ala Ala Leu
35 40 45

Pro Phe Asp Leu Leu His Ala Lys Val Asn Tyr Val Gly Ala
50 55 60

<210> 4
<211> 62
<212> PRT
<213> Unknown

<220>
<223> Exemplary Protein Sequence.

<400> 4

Ile Ala Val Glu Ile Leu Phe Ile Ile Asp Ile Ile Leu Asn Phe Arg
1 5 10 15

Thr Thr Tyr Val Ser Lys Gly Gln Val Ile Phe Glu Ala Arg Ile Cys
20 25 30

Ile His Tyr Val Thr Thr Trp Phe Ile Ile Asp Leu Ile Ala Ala Leu
35 40 45

USSN 10-731,875 - Thomas, et al. (9692-000029) Seq. Listing ST25

Pro Phe Asp Leu Leu Tyr Ala Asn Val Thr Val Ser Leu Val
50 55 60

<210> 5
<211> 62
<212> PRT
<213> Unknown

<220>
<223> Exemplary Protein Sequence.

<400> 5

Ile Ala Val Glu Ile Leu Phe Ile Ile Asp Ile Ile Leu Asn Phe Arg
1 5 10 15

Thr Thr Tyr Val Ser Lys Gly Gln Val Ile Phe Glu Ala Arg Ile Cys
20 25 30

Thr His Tyr Val Thr Thr Trp Phe Ile Ile Asp Leu Ile Ala Ala Leu
35 40 45

Pro Phe Asp Leu Leu Tyr Ala Asn Val Thr Val Ser Leu Val
50 55 60

<210> 6
<211> 62
<212> PRT
<213> Unknown

<220>
<223> Exemplary Protein Sequence.

<400> 6

Ile Ala Val Glu Met Leu Phe Ile Leu Asp Ile Ile Leu Asn Phe Arg
1 5 10 15

Thr Thr Tyr Val Ser Gln Gly Gln Val Val Ser Ala Pro Arg Ile Gly
20 25 30

Leu His Tyr Leu Ala Thr Trp Phe Phe Val Asp Leu Ile Ala Ala Leu
35 40 45

Pro Phe Asp Leu Leu Tyr Val Asn Ile Thr Thr Ser Leu Val
50 55 60

<210> 7
<211> 62
<212> PRT
<213> Unknown

<220>

<223> Exemplary Protein Sequence.

<400> 7

Ile Ala Val Glu Met Leu Phe Ile Leu Asp Ile Ile Leu Asn Phe Arg
1 5 10 15

Thr Thr Tyr Val Ser Gln Gly Gln Val Val Ser Ala Pro Arg Ile Gly
20 25 30

Leu His Tyr Leu Ala Thr Trp Phe Phe Val Asp Leu Ile Ala Ala Leu
35 40 45

Pro Phe Asp Leu Leu Tyr Val Asn Ile Thr Thr Ser Leu Val
50 55 60

<210> 8

<211> 62

<212> PRT

<213> Unknown

<220>

<223> Exemplary Protein Sequence.

<400> 8

Ile Ala Val Glu Met Leu Phe Ile Leu Asp Ile Ile Leu Asn Phe Arg
1 5 10 15

Thr Thr Tyr Val Ser Gln Gly Gln Val Ile Ser Ala Pro Arg Ile Gly
20 25 30

Leu His Tyr Leu Ala Thr Trp Phe Phe Ile Asp Leu Ile Ala Ala Leu
35 40 45

Pro Phe Asp Leu Leu Tyr Ile Asn Ile Thr Thr Ser Leu Val
50 55 60

<210> 9

<211> 62

<212> PRT

<213> Unknown

<220>

<223> Exemplary Protein Sequence.

<400> 9

Ile Ala Val Glu Met Leu Phe Ile Leu Asp Ile Ile Leu Asn Phe Arg
1 5 10 15

Thr Thr Tyr Val Ser Gln Gly Gln Val Ile Ser Ala Pro Arg Ile Gly
20 25 30

USSN 10-731,875 - Thomas, et al. (9692-000029) Seq. Listing ST25

Leu His Tyr Leu Ala Thr Trp Phe Phe Ile Asp Leu Ile Ala Ala Leu
 35 40 45

Pro Phe Asp Leu Leu Tyr Ile Asn Ile Thr Thr Ser Leu Val
 50 55 60

<210> 10
 <211> 67
 <212> PRT
 <213> Unknown

<220>
 <223> Exemplary Protein Sequence.

<400> 10

Ser Ile Val Asp Val Ile Phe Phe Ile Asp Ile Val Leu Asn Phe His
 1 5 10 15

Thr Thr Phe Val Gly Pro Gly Gly Glu Val Val Ser Asp Pro Lys Val
 20 25 30

Ile Met Asn Tyr Leu Lys Ser Trp Phe Ile Ile Asp Leu Leu Ser Cys
 35 40 45

Leu Pro Asp Val Phe Asn Ala Phe Asp Arg Asp Glu Asp Gly Ile Gly
 50 55 60

Ser Leu Phe
 65

<210> 11
 <211> 67
 <212> PRT
 <213> Unknown

<220>
 <223> Exemplary Protein Sequence.

<400> 11

Ser Ile Val Asp Val Ile Phe Phe Ile Asp Ile Val Leu Asn Phe His
 1 5 10 15

Thr Thr Phe Val Gly Pro Gly Gly Glu Val Val Ser Asp Pro Lys Val
 20 25 30

Ile Met Asn Tyr Leu Lys Ser Trp Phe Ile Ile Asp Leu Leu Ser Cys
 35 40 45

Leu Pro Asp Val Phe Asn Ala Phe Asp Arg Asp Glu Asp Gly Ile Gly
 50 55 60

Ser Leu Phe
65

<210> 12
<211> 67
<212> PRT
<213> Unknown

<220>
<223> Exemplary Protein Sequence.

<400> 12

Ser Ile Val Asp Val Ile Phe Phe Ala Asp Ile Leu Leu Asn Phe His
1 5 10 15

Thr Thr Phe Val Gly Pro Gly Gly Glu Val Val Ile Glu Pro Ser Val
20 25 30

Ile Gln Asn Tyr Phe Lys Ser Trp Phe Leu Ile Asp Leu Leu Ser Cys
35 40 45

Leu Pro Asp Ile Phe Tyr Met Phe Lys Arg Asp Asp Glu Arg Ile Gly
50 55 60

Ser Leu Phe
65

<210> 13
<211> 67
<212> PRT
<213> Unknown

<220>
<223> Exemplary Protein Sequence.

<400> 13

Ser Ile Val Asp Val Ile Phe Phe Ala Asp Ile Leu Leu Asn Phe His
1 5 10 15

Thr Thr Phe Val Gly Pro Gly Gly Glu Val Val Ile Glu Pro Ser Val
20 25 30

Ile Gln Asn Tyr Phe Lys Ser Trp Phe Leu Ile Asp Leu Leu Ser Cys
35 40 45

Leu Pro Asp Ile Phe Tyr Met Phe Lys Arg Asp Asp Glu Arg Ile Gly
50 55 60

Ser Leu Phe

65

<210> 14
 <211> 67
 <212> PRT
 <213> Unknown

<220>
 <223> Exemplary Protein Sequence.

<400> 14

Ser Val Val Asp Val Ile Phe Leu Val Asp Ile Val Leu Asn Phe His
 1 5 10 15

Thr Thr Phe Val Gly Pro Gly Gly Glu Val Ile Ser Asp Pro Lys Leu
 20 25 30

Ile Met Asn Tyr Leu Lys Thr Trp Phe Val Ile Asp Leu Leu Ser Cys
 35 40 45

Leu Pro Asp Ile Ile Asn Ala Phe Glu Asn Val Asp Glu Gly Ile Ser
 50 55 60

Ser Leu Phe
 65

<210> 15
 <211> 67
 <212> PRT
 <213> Unknown

<220>
 <223> Exemplary Protein Sequence.

<400> 15

Ser Val Val Asp Val Ile Phe Leu Val Asp Ile Val Leu Asn Phe His
 1 5 10 15

Thr Thr Phe Val Gly Pro Gly Gly Glu Val Ile Ser Asp Pro Lys Leu
 20 25 30

Ile Met Asn Tyr Leu Lys Thr Trp Phe Val Ile Asp Leu Leu Ser Cys
 35 40 45

Leu Pro Asp Ile Ile Asn Ala Phe Glu Asn Val Asp Glu Gly Ile Ser
 50 55 60

Ser Leu Phe
 65

USSN 10-731,875 - Thomas, et al. (9692-000029) Seq. Listing ST25

<210> 16

<211> 80

<212> PRT

<213> Unknown

<220>

<223> Exemplary Protein Sequence.

<400> 16

Ser Ile Val Asp Val Ile Phe Leu Val Asp Ile Val Leu Asn Phe His
1 5 10 15

Thr Thr Phe Val Gly Pro Ala Gly Glu Val Ile Ser Asp Pro Lys Leu
20 25 30

Ile Met Asn Tyr Leu Lys Thr Trp Phe Val Ile Asp Leu Leu Ser Cys
35 40 45

Leu Pro Asp Val Ile Asn Ala Phe Glu Asn Val Asp Glu Val Ser Ala
50 55 60

Phe Met Gly Asp Pro Gly Lys Ile Gly Phe Ala Asp Gln Ile Pro Pro
65 70 75 80

<210> 17

<211> 80

<212> PRT

<213> Unknown

<220>

<223> Exemplary Protein Sequence.

<400> 17

Ser Ile Val Asp Val Ile Phe Leu Val Asp Ile Val Leu Asn Phe His
1 5 10 15

Thr Thr Phe Val Gly Pro Ala Gly Glu Val Ile Ser Asp Pro Lys Leu
20 25 30

Ile Met Asn Tyr Leu Lys Thr Trp Phe Val Ile Asp Leu Leu Ser Cys
35 40 45

Leu Pro Asp Val Ile Asn Ala Phe Glu Asn Val Asp Glu Val Ser Ala
50 55 60

Phe Met Gly Asp Pro Gly Lys Ile Gly Phe Ala Asp Gln Ile Pro Pro
65 70 75 80

<210> 18

<211> 80

<212> PRT

USSN 10-731,875 - Thomas, et al. (9692-000029) Seq. Listing ST25

<213> Unknown

<220>

<223> Exemplary Protein Sequence.

<400> 18

Ser Ile Val Asp Val Ile Phe Leu Val Asp Ile Val Leu Asn Phe His
1 5 10 15

Thr Thr Phe Val Gly Pro Ala Gly Glu Val Ile Ser Asp Pro Lys Leu
20 25 30

Ile Met Asn Tyr Leu Lys Thr Trp Phe Val Ile Asp Leu Leu Ser Cys
35 40 45

Leu Pro Asp Val Ile Asn Ala Phe Glu Asn Val Asp Glu Val Ser Ala
50 55 60

Phe Met Gly Asp Pro Gly Lys Ile Gly Phe Ala Asp Gln Ile Pro Pro
65 70 75 80

<210> 19

<211> 67

<212> PRT

<213> Unknown

<220>

<223> Exemplary Protein Sequence.

<400> 19

Ser Ile Val Asp Val Ile Phe Leu Val Asp Ile Val Leu Asn Phe His
1 5 10 15

Thr Thr Phe Val Gly Pro Ala Gly Glu Val Ile Ser Asp Pro Lys Leu
20 25 30

Ile Met Asn Tyr Leu Lys Thr Trp Phe Val Ile Asp Leu Leu Ser Cys
35 40 45

Leu Pro Asp Val Ile Asn Ala Phe Glu Asn Val Asp Glu Gly Ile Ser
50 55 60

Ser Leu Phe
65

<210> 20

<211> 67

<212> PRT

<213> Unknown

<220>

USSN 10-731,875 - Thomas, et al. (9692-000029) Seq. Listing ST25

<223> Exemplary Protein Sequence.

<400> 20

Ser Ile Val Asp Val Ile Phe Leu Val Asp Ile Val Leu Asn Phe His
1 5 10 15

Thr Thr Phe Val Gly Pro Ala Gly Glu Val Ile Ser Asp Pro Lys Leu
20 25 30

Ile Met Asn Tyr Leu Lys Thr Trp Phe Val Ile Asp Leu Leu Ser Cys
35 40 45

Leu Pro Asp Val Ile Asn Ala Phe Glu Asn Val Asp Glu Gly Ile Ser
50 55 60

Ser Leu Phe
65

<210> 21

<211> 97

<212> PRT

<213> Unknown

<220>

<223> Exemplary Protein Sequence.

<400> 21

Ser Thr Lys Val Thr Gln Glu Leu Thr Glu Leu Ile Glu Glu Ser Met
1 5 10 15

Lys Glu Val Lys Ala Tyr Arg Glu Glu Leu Glu Ala Gln Leu Gly Pro
20 25 30

Val Thr Gln Glu Thr Gln Ala Arg Leu Ser Lys Glu Leu Gln Ala Ala
35 40 45

Gln Ala Arg Val Gly Ala Asp Met Glu Asp Val Arg Asn Arg Leu Val
50 55 60

Leu Tyr Arg Ser Glu Val His Asn Met Leu Gly Gly Thr Thr Glu Glu
65 70 75 80

Leu Arg Ser Arg Leu Ala Ser His Leu Arg Lys Leu Arg Lys Arg Leu
85 90 95

Leu

<210> 22

<211> 97

<212> PRT

<213> Unknown

<220>

<223> Exemplary Protein Sequence.

<400> 22

Ser Thr Lys Val Thr Gln Glu Leu Thr Glu Leu Ile Glu Glu Ser Met
1 5 10 15

Lys Glu Val Lys Ala Tyr Arg Glu Glu Leu Glu Ala Gln Leu Gly Pro
20 25 30

Val Thr Gln Glu Thr Gln Ala Arg Leu Ser Lys Glu Leu Gln Ala Ala
35 40 45

Gln Ala Arg Val Gly Ala Asp Met Glu Asp Val Arg Asn Arg Leu Val
50 55 60

Leu Tyr Arg Ser Glu Val His Asn Met Leu Gly Gly Thr Thr Glu Glu
65 70 75 80

Leu Arg Ser Arg Leu Ala Ser His Leu Arg Asn Val Arg Lys Arg Leu
85 90 95

Val

<210> 23

<211> 96

<212> PRT

<213> Unknown

<220>

<223> Exemplary Protein Sequence.

<400> 23

Thr Gln Val Ile Gln Glu Leu Thr Val Leu Met Glu Glu Thr Met Lys
1 5 10 15

Glu Val Lys Ala Tyr Arg Glu Glu Leu Glu Gly Gln Leu Ala Pro Met
20 25 30

Ala Gln Glu Thr Gln Ala Arg Val Ser Lys Glu Leu Gln Ala Ala Gln
35 40 45

Ala Arg Leu Gly Ser Asp Met Glu Asp Leu Arg Asn Arg Leu Ala Gln
50 55 60

Tyr Arg Ser Glu Val Gln Ala Met Leu Gly Gly Ser Thr Glu Glu Leu
65 70 75 80

Arg Ala Arg Met Ala Ser His Leu Arg Lys Leu Arg Lys Arg Leu Leu
85 90 95

<210> 24
<211> 95
<212> PRT
<213> Unknown

<220>
<223> Exemplary Protein Sequence.

<400> 24

Thr Gln Val Ile Gln Glu Leu Thr Ala Leu Met Glu Glu Thr Met Lys
1 5 10 15

Glu Val Lys Ala Tyr Lys Glu Glu Leu Glu Gly Gln Leu Gly Pro Met
20 25 30

Ala Gln Glu Thr Gln Ala Arg Val Ser Lys Glu Leu Gln Ala Ala Gln
35 40 45

Ala Arg Leu Gly Ser Asp Met Glu Asp Leu Cys Gly Arg Leu Ala Gln
50 55 60

Tyr Arg Ser Glu Val Gln Ala Met Leu Gly Gly Ser Thr Glu Glu Leu
65 70 75 80

Arg Ala Arg Met Ala Ser His Leu Arg Lys Pro Lys Arg Leu Leu
85 90 95

<210> 25
<211> 96
<212> PRT
<213> Unknown

<220>
<223> Exemplary Protein Sequence.

<400> 25

Thr Gln Val Ile Gln Glu Leu Thr Ala Leu Met Glu Glu Thr Met Lys
1 5 10 15

Glu Val Lys Ala Tyr Lys Glu Glu Leu Glu Gly Gln Leu Gly Pro Met
20 25 30

Ala Gln Glu Thr Gln Ala Arg Val Ser Lys Glu Leu Gln Ala Ala Gln
35 40 45

USSN 10-731,875 - Thomas, et al. (9692-000029) Seq. Listing ST25

Ala Arg Leu Gly Ser Asp Met Glu Asp Leu Arg Asn Arg Leu Ala Gln
50 55 60

Tyr Arg Ser Glu Val Gln Ala Met Leu Gly Gly Ser Thr Glu Glu Leu
65 70 75 80

Arg Ala Arg Met Ala Ser His Leu Arg Lys Leu Pro Lys Arg Leu Leu
85 90 95

<210> 26
<211> 96
<212> PRT
<213> Unknown

<220>
<223> Exemplary Protein Sequence.

<400> 26

Ser Gln Val Thr Gln Glu Leu Thr Val Leu Met Glu Glu Thr Met Lys
1 5 10 15

Glu Val Lys Ala Tyr Lys Ala Glu Leu Glu Glu Gln Leu Gly Pro Met
20 25 30

Lys Glu Glu Thr Gln Ala Arg Leu Ser Lys Glu Leu Gln Ala Ala Gln
35 40 45

Ala Arg Leu Gly Ala Asp Met Glu Asp Val Arg Thr Arg Leu Ala Gln
50 55 60

Tyr Arg Ser Glu Val His Thr Met Leu Gly Gly Ser Thr Glu Glu Leu
65 70 75 80

Arg Ala Arg Leu Ser Ser His Leu Arg Lys Met Arg Lys Arg Leu Leu
85 90 95

<210> 27
<211> 96
<212> PRT
<213> Unknown

<220>
<223> Exemplary Protein Sequence.

<400> 27

Ser Gln Val Thr Gln Glu Leu Thr Ala Leu Met Asp Glu Thr Met Lys
1 5 10 15

Glu Leu Lys Ala Tyr Lys Ser Glu Leu Glu Glu Gln Leu Ser Pro Val
20 25 30

Ala Glu Glu Thr Arg Ala Arg Leu Ser Lys Glu Leu Gln Ala Ala Gln
35 40 45

Ala Arg Leu Gly Ala Asp Met Glu Asp Val Arg Ser Arg Leu Ala Gln
50 55 60

Tyr Arg Ser Glu Val Gln Ala Met Leu Gly Gly Ser Thr Asp Glu Leu
65 70 75 80

Arg Ala Arg Leu Ala Ser His Leu Arg Lys Leu Arg Lys Arg Leu Leu
85 90 95

<210> 28
<211> 96
<212> PRT
<213> Unknown

<220>
<223> Exemplary Protein Sequence.

<400> 28

Pro Gln Val Thr Gln Glu Leu Thr Thr Leu Met Asp Glu Thr Met Lys
1 5 10 15

Glu Leu Lys Ala Tyr Lys Ser Glu Leu Glu Glu Gln Leu Ser Pro Val
20 25 30

Ala Glu Glu Thr Arg Ala Arg Leu Ser Lys Glu Leu Gln Ala Ala Gln
35 40 45

Ala Arg Leu Gly Ala Asp Met Glu Asp Val Arg Ser Arg Leu Val Gln
50 55 60

Tyr Arg Ser Glu Val Gln Ala Met Leu Gly Gly Ser Thr Glu Glu Leu
65 70 75 80

Arg Ala Arg Leu Ala Ser His Leu Arg Lys Leu Arg Lys Arg Leu Leu
85 90 95

<210> 29
<211> 96
<212> PRT
<213> Unknown

<220>
<223> Exemplary Protein Sequence.

<400> 29

Pro Gln Val Thr Gln Glu Leu Thr Thr Leu Met Asp Glu Thr Met Lys
Page 14

1 5 10 15

Glu Leu Lys Ala Tyr Lys Ser Glu Leu Glu Glu Gln Leu Ser Pro Val
 20 25 30

Ala Glu Glu Thr Arg Ala Arg Leu Ser Lys Glu Leu Gln Ala Ala Gln
 35 40 45

Ala Arg Leu Gly Ala Asp Met Glu Asp Val Arg Ser Arg Leu Val Gln
 50 55 60

Tyr Arg Ser Glu Val Gln Ala Met Leu Gly Gly Ser Thr Glu Glu Leu
65 70 75 80

Arg Ala Arg Leu Ala Ser His Leu Arg Lys Leu Arg Lys Arg Leu Leu
 85 90 95

<210>	30
<211>	96
<212>	PRT
<213>	Unknown

<220>
<223> Exemplary Protein Sequence.

<400> 30

Pro 1	Gln	Val	Thr	Gln 5	Glu	Leu	Thr	Thr	Leu 10	Met	Asp	Glu	Thr	Met 15	Lys
Glu	Leu	Lys	Ala 20	Tyr	Lys	Ser	Glu	Leu 25	Glu	Glu	Gln	Leu	Ser 30	Pro	Val
Ala	Glu	Glu 35	Thr	Arg	Ala	Arg	Leu 40	Ser	Lys	Glu	Leu	Gln 45	Ala	Ala	Gln
Ala	Arg 50	Leu	Gly	Ala	Asp	Met 55	Glu	Asp	Val	Arg	Ser 60	Arg	Leu	Val	Gln
Tyr 65	Arg	Ser	Glu	Val	Gln 70	Ala	Met	Leu	Gly	Gly 75	Ser	Thr	Glu	Glu	Leu 80
Arg	Ala	Arg	Leu	Ala 85	Ser	His	Leu	Arg	Lys 90	Leu	Arg	Lys	Arg	Leu 95	Leu

<210>	31
<211>	96
<212>	PRT
<213>	Unknown

<220>

<223> Exemplary Protein Sequence.

<400> 31

Ser Gln Val Thr Gln Glu Leu Thr Ala Leu Met Asp Glu Thr Met Lys
1 5 10 15

Glu Leu Lys Ala Tyr Arg Ser Glu Leu Glu Glu Gln Leu Thr Pro Val
20 25 30

Ala Glu Glu Thr Arg Ala Arg Leu Ser Lys Glu Leu Gln Ala Ala Gln
35 40 45

Ala Arg Leu Gly Ala Asp Met Glu Asp Val Arg Gly Arg Leu Val Gln
50 55 60

Tyr Arg Gly Glu Val Gln Ala Met Leu Gly Gly Ser Thr Glu Glu Leu
65 70 75 80

Arg Ala Arg Leu Ala Ser His Leu Arg Lys Leu Arg Lys Arg Leu Leu
85 90 95

<210> 32

<211> 96

<212> PRT

<213> Unknown

<220>

<223> Exemplary Protein Sequence.

<400> 32

Ser Gln Val Thr Gln Glu Leu Arg Ala Leu Met Asp Glu Thr Met Lys
1 5 10 15

Glu Leu Lys Ala Tyr Lys Ser Glu Leu Glu Glu Gln Leu Thr Pro Val
20 25 30

Ala Glu Glu Thr Arg Ala Arg Leu Ser Lys Glu Leu Gln Ala Ala Gln
35 40 45

Ala Arg Leu Gly Ala Asp Met Glu Asp Val Arg Gly Arg Leu Val Gln
50 55 60

Tyr Arg Gly Glu Val Gln Ala Met Leu Gly Gly Ser Thr Glu Glu Leu
65 70 75 80

Arg Val Arg Leu Ala Ser His Leu Arg Lys Leu Arg Lys Arg Leu Leu
85 90 95

<210> 33

<211> 96

<212> PRT

<213> Unknown

<220>

<223> Exemplary Protein Sequence.

<400> 33

Ser Gln Val Thr Gln Glu Leu Arg Ala Leu Met Asp Glu Thr Met Lys
1 5 10 15

Glu Leu Lys Ala Tyr Lys Ser Glu Leu Glu Glu Gln Leu Thr Pro Val
20 25 30

Ala Glu Glu Thr Arg Ala Arg Leu Ser Lys Glu Leu Gln Ala Ala Gln
35 40 45

Ala Arg Leu Gly Ala Asp Met Glu Asp Val Cys Gly Arg Leu Val Gln
50 55 60

Tyr Arg Gly Glu Val Gln Ala Met Leu Gly Gly Ser Thr Glu Glu Leu
65 70 75 80

Arg Val Arg Leu Ala Ser His Leu Arg Lys Leu Arg Lys Arg Leu Leu
85 90 95

<210> 34

<211> 96

<212> PRT

<213> Unknown

<220>

<223> Exemplary Protein Sequence.

<400> 34

Ser Gln Val Thr Gln Glu Leu Arg Ala Leu Met Asp Glu Thr Met Lys
1 5 10 15

Glu Leu Lys Ala Tyr Lys Ser Glu Leu Glu Glu Gln Leu Thr Pro Val
20 25 30

Ala Glu Glu Thr Arg Ala Arg Leu Ser Lys Glu Leu Gln Thr Ala Gln
35 40 45

Ala Arg Leu Gly Ala Asp Met Glu Asp Val Cys Gly Arg Leu Val Gln
50 55 60

Tyr Arg Gly Glu Val Gln Ala Met Leu Gly Gly Ser Thr Glu Glu Leu
65 70 75 80

USSN 10-731,875 - Thomas, et al. (9692-000029) Seq. Listing ST25
 Arg Val Arg Leu Ala Ser His Leu Arg Lys Leu Arg Lys Arg Leu Leu
 85 90 95

<210> 35
 <211> 96
 <212> PRT
 <213> Unknown

<220>
 <223> Exemplary Protein Sequence.

<400> 35

Ser Gln Val Thr Gln Glu Leu Thr Ala Leu Met Asp Glu Thr Met Lys
 1 5 10 15

Glu Leu Lys Ala Tyr Lys Ser Glu Leu Glu Glu Gln Leu Thr Pro Val
 20 25 30

Ala Glu Glu Thr Arg Ala Arg Leu Ser Lys Glu Leu Gln Ala Ala Gln
 35 40 45

Ala Arg Leu Gly Ala Asp Met Glu Asp Val Arg Gly Arg Leu Val Gln
 50 55 60

Tyr Arg Gly Glu Val Gln Ala Met Leu Gly Gly Ser Thr Glu Glu Leu
 65 70 75 80

Arg Ala Arg Leu Ala Ser His Leu Arg Lys Leu Arg Lys Arg Leu Leu
 85 90 95

<210> 36
 <211> 96
 <212> PRT
 <213> Unknown

<220>
 <223> Exemplary Protein Sequence.

<400> 36

Ser Gln Val Thr Gln Glu Leu Thr Ala Leu Met Asp Glu Thr Met Lys
 1 5 10 15

Glu Leu Lys Ala Tyr Lys Ser Glu Leu Glu Glu Gln Leu Thr Pro Val
 20 25 30

Ala Glu Glu Thr Arg Ala Arg Leu Ser Lys Glu Leu Gln Ala Ala Gln
 35 40 45

Ala Arg Leu Gly Ala Asp Met Glu Asp Val Arg Gly Arg Leu Val Gln
 50 55 60

USSN 10-731,875 - Thomas, et al. (9692-000029) Seq. Listing ST25

Tyr Arg Gly Glu Val Gln Ala Met Leu Gly Gly Ser Thr Glu Glu Leu
65 70 75 80

Arg Ala Arg Leu Ala Ser His Leu Arg Lys Leu Arg Lys Arg Leu Leu
85 90 95

<210> 37
<211> 96
<212> PRT
<213> Unknown

<220>
<223> Exemplary Protein Sequence.

<400> 37

Ser Gln Val Thr Gln Glu Leu Thr Ala Leu Met Asp Glu Thr Met Lys
1 5 10 15

Glu Leu Lys Ala Tyr Lys Ser Glu Leu Glu Glu Gln Leu Thr Pro Val
20 25 30

Ala Glu Glu Thr Arg Ala Arg Leu Ser Lys Glu Leu Gln Ala Ala Gln
35 40 45

Ala Arg Leu Gly Ala Asp Met Glu Asp Val Arg Gly Arg Leu Ala Gln
50 55 60

Tyr Arg Gly Glu Val Gln Ala Met Leu Gly Gly Ser Thr Glu Glu Leu
65 70 75 80

Arg Ala Arg Leu Ala Ser His Leu Arg Lys Leu Arg Lys Arg Leu Leu
85 90 95

<210> 38
<211> 107
<212> PRT
<213> Unknown

<220>
<223> Exemplary Protein Sequence.

<400> 38

Thr Asp Val Thr Gln Gln Leu Asn Thr Leu Phe Gln Asp Lys Leu Gly
1 5 10 15

Asn Ile Asn Thr Tyr Ala Asp Asp Leu Gln Asn Lys Leu Val Pro Phe
20 25 30

Ala Val Gln Leu Ser Gly His Leu Thr Lys Glu Thr Glu Arg Val Arg
35 40 45

USSN 10-731,875 - Thomas, et al. (9692-000029) Seq. Listing ST25

Glu Glu Ile Gln Lys Glu Leu Glu Asp Leu Arg Ala Asn Met Met Pro
50 55 60

His Ala Asn Lys Val Ser Gly Met Phe Gly Asp Asn Val Gln Lys Leu
65 70 75 80

Gln Glu His Leu Arg Pro Tyr Ala Thr Asp Leu Gln Ala Gln Ile Asn
85 90 95

Ala Gln Thr Gln Asp Met Lys Arg Gln Leu Thr
100 105

<210> 39
<211> 107
<212> PRT
<213> Unknown

<220>
<223> Exemplary Protein Sequence.

<400> 39

Thr Asp Val Thr Gln Gln Leu Asn Thr Leu Phe Gln Asp Lys Leu Gly
1 5 10 15

Asn Ile Asn Thr Tyr Ala Asp Asp Leu Gln Asn Lys Leu Val Pro Phe
20 25 30

Ala Val Gln Leu Ser Gly His Leu Thr Lys Glu Thr Glu Arg Val Arg
35 40 45

Glu Glu Ile Gln Lys Glu Leu Glu Asp Leu Arg Ala Asn Met Met Pro
50 55 60

His Ala Asn Lys Val Ser Gln Met Phe Gly Asp Asn Val Gln Lys Leu
65 70 75 80

Gln Glu His Leu Arg Pro Tyr Ala Thr Asp Leu Gln Ala Gln Ile Asn
85 90 95

Ala Gln Thr Gln Asp Met Lys Arg Gln Leu Thr
100 105

<210> 40
<211> 107
<212> PRT
<213> Unknown

<220>
<223> Exemplary Protein Sequence.

<400> 40

Thr Asp Val Thr Gln Gln Leu Ser Thr Leu Phe Lys Asp Lys Leu Gly
1 5 10 15

Asp Ala Ser Thr Tyr Ala Asp Gly Val His Asn Lys Leu Val Pro Phe
20 25 30

Val Val Gln Leu Ser Gly His Leu Ala Lys Glu Thr Glu Arg Val Lys
35 40 45

Glu Glu Ile Lys Lys Glu Leu Glu Asp Leu Arg Asp Arg Met Met Pro
50 55 60

His Ala Asn Lys Val Thr Gln Thr Phe Gly Glu Asn Met Gln Lys Leu
65 70 75 80

Gln Glu His Leu Lys Pro Tyr Ala Val Asp Leu Gln Asp Gln Ile Asn
85 90 95

Thr Gln Thr Gln Glu Met Lys Leu Gln Leu Thr
100 105

<210> 41

<211> 107

<212> PRT

<213> Unknown

<220>

<223> Exemplary Protein Sequence.

<400> 41

Thr Asp Val Thr Gln Gln Leu Ser Thr Leu Phe Gln Asp Lys Leu Gly
1 5 10 15

Asp Ala Ser Thr Tyr Ala Asp Gly Val His Asn Lys Leu Val Pro Phe
20 25 30

Val Val Gln Leu Ser Gly His Leu Ala Lys Glu Thr Glu Arg Val Lys
35 40 45

Glu Glu Ile Lys Lys Glu Leu Glu Asp Leu Arg Asp Arg Met Met Pro
50 55 60

His Ala Asn Lys Val Thr Gln Thr Phe Gly Glu Asn Met Gln Lys Leu
65 70 75 80

Gln Glu His Leu Lys Pro Tyr Ala Val Asp Leu Gln Asp Gln Ile Asn
85 90 95

Thr Gln Thr Gln Glu Met Lys Leu Gln Leu Thr
100 105

<210> 42
<211> 107
<212> PRT
<213> Unknown

<220>
<223> Exemplary Protein Sequence.

<400> 42

Thr Asp Val Thr Gln Gln Leu Ser Thr Leu Phe Gln Asp Lys Leu Gly
1 5 10 15

Asp Ala Ser Thr Tyr Ala Asp Gly Val His Asn Lys Leu Val Pro Phe
20 25 30

Val Val Gln Leu Ser Gly His Leu Ala Gln Glu Thr Glu Arg Val Lys
35 40 45

Glu Glu Ile Lys Lys Glu Leu Glu Asp Gln Arg Asp Arg Met Met Pro
50 55 60

His Ala Asn Lys Val Thr Gln Thr Phe Gly Glu Asn Met Gln Lys Leu
65 70 75 80

Gln Glu His Leu Lys Pro Tyr Ala Val Asp Leu Gln Asp Gln Ile Asn
85 90 95

Thr Gln Thr Gln Glu Met Lys Leu Gln Leu Thr
100 105

<210> 43
<211> 107
<212> PRT
<213> Unknown

<220>
<223> Exemplary Protein Sequence.

<400> 43

Thr Asp Val Thr Gln Gln Leu Ser Thr Leu Phe Gln Asp Lys Leu Gly
1 5 10 15

Asp Ala Ser Thr Tyr Ala Asp Gly Val His Asn Lys Leu Val Pro Phe
20 25 30

Val Val Gln Leu Ser Gly His Leu Ala Lys Glu Thr Glu Arg Val Lys
Page 22

Glu Glu Ile Lys Lys Glu Leu Glu Asp Leu Arg Asp Arg Met Met Pro
50 55 60

His Ala Asn Lys Val Thr Gln Thr Phe Gly Glu Asn Met Gln Lys Leu
65 70 75 80

Gln Glu His Leu Lys Pro Tyr Ala Val Asp Leu Gln Asp Gln Ile Asn
85 90 95

Thr Gln Thr Gln Glu Met Lys Leu Gln Leu Thr
100 105

<210> 44

<211> 107

<212> PRT

<213> Unknown

<220>

<223> Exemplary Protein Sequence.

<400> 44

Thr Asp Val Thr Gln Gln Leu Ser Thr Leu Phe Gln Asp Lys Leu Gly
1 5 10 15

Asp Ala Ser Thr Tyr Ala Asp Gly Val His Asn Lys Leu Val Pro Phe
20 25 30

Val Val Gln Leu Ser Gly His Leu Ala Lys Glu Thr Glu Arg Val Lys
35 40 45

Glu Glu Ile Lys Lys Glu Leu Glu Asp Leu Arg Asp Arg Met Met Pro
50 55 60

His Ala Asn Lys Val Thr Gln Thr Phe Gly Glu Asn Met Gln Lys Leu
65 70 75 80

Gln Glu His Leu Lys Pro Tyr Ala Val Asp Leu Gln Asp Gln Ile Asn
85 90 95

Thr Gln Thr Gln Glu Met Lys Leu Gln Leu Thr
100 105

<210> 45

<211> 85

<212> PRT

<213> Unknown

<220>

USSN 10-731,875 - Thomas, et al. (9692-000029) Seq. Listing ST25

<223> Exemplary Protein Sequence.

<400> 45

Ala Glu Ile Thr Lys Gln Leu Asn Thr Leu Leu Gln Ser Asn Leu Gln
1 5 10 15

Ser Ala Asn Ser Tyr Ala Glu Glu Leu Gln Arg Arg Leu Val Pro Phe
20 25 30

Ala Thr Glu Leu Gln Ala Gln Leu Val Gln Asp Ser Gln Arg Leu Lys
35 40 45

Lys Gln Ile Gln Gln Glu Leu Ala Glu Leu Gln Ala Lys Leu Ala Pro
50 55 60

Tyr Ala Asp Glu Val His Gln Gln Ile Gly Thr Asn Ile Arg Glu Leu
65 70 75 80

Gln Ala Lys Leu Ser
85

<210> 46

<211> 85

<212> PRT

<213> Unknown

<220>

<223> Exemplary Protein Sequence.

<400> 46

Ser Glu Leu Thr Gln Gln Leu Asn Thr Leu Phe Gln Asp Lys Leu Gly
1 5 10 15

Glu Val Asn Thr Tyr Thr Glu Asp Leu Gln Lys Lys Leu Val Pro Phe
20 25 30

Ala Thr Glu Leu His Glu Arg Leu Thr Lys Asp Ser Glu Lys Leu Lys
35 40 45

Glu Glu Ile Arg Arg Glu Leu Glu Glu Leu Arg Ala Arg Leu Leu Pro
50 55 60

His Ala Thr Glu Val Ser Gln Lys Ile Gly Asp Asn Val Arg Glu Leu
65 70 75 80

Gln Gln Arg Leu Gly
85

<210> 47

USSN 10-731,875 - Thomas, et al. (9692-000029) Seq. Listing ST25

<211> 85

<212> PRT

<213> Unknown

<220>

<223> Exemplary Protein Sequence.

<400> 47

Ser Glu Leu Thr Gln Gln Leu Asn Ala Leu Phe Gln Asp Lys Leu Gly
1 5 10 15

Glu Val Asn Thr Tyr Ala Gly Asp Leu Gln Lys Lys Leu Val Pro Phe
20 25 30

Ala Thr Glu Leu His Glu Arg Leu Ala Lys Asp Ser Lys Lys Leu Lys
35 40 45

Glu Glu Ile Arg Lys Glu Leu Glu Glu Val Arg Ala Arg Leu Leu Pro
50 55 60

His Ala Asn Glu Val Ser Gln Lys Ile Gly Glu Asn Val Arg Glu Leu
65 70 75 80

Gln Gln Arg Leu Glu
85

<210> 48

<211> 85

<212> PRT

<213> Unknown

<220>

<223> Exemplary Protein Sequence.

<400> 48

Ser Glu Leu Thr Gln Gln Leu Asn Ala Leu Phe Gln Asp Lys Leu Gly
1 5 10 15

Glu Val Asn Thr Tyr Ala Gly Asp Leu Gln Lys Lys Leu Val Pro Phe
20 25 30

Ala Thr Glu Leu His Glu Arg Leu Ala Lys Asp Ser Glu Lys Leu Lys
35 40 45

Glu Glu Ile Arg Lys Glu Leu Glu Glu Val Arg Ala Arg Leu Leu Pro
50 55 60

His Ala Asn Glu Val Ser Gln Lys Ile Gly Glu Asn Val Arg Glu Leu
65 70 75 80

Gln Gln Arg Leu Glu
85

<210> 49
<211> 85
<212> PRT
<213> Unknown

<220>
<223> Exemplary Protein Sequence.

<400> 49

Ser Glu Leu Thr Gln Gln Leu Asn Ala Leu Phe Gln Asp Lys Leu Gly
1 5 10 15

Glu Val Asn Thr Tyr Ala Gly Asp Leu Gln Lys Lys Leu Val Pro Phe
20 25 30

Ala Thr Glu Leu His Glu Arg Leu Ala Lys Asp Ser Glu Lys Leu Lys
35 40 45

Glu Glu Ile Gly Lys Glu Leu Glu Glu Leu Arg Ala Arg Leu Leu Pro
50 55 60

His Ala Asn Glu Val Ser Gln Lys Ile Gly Asp Asn Leu Arg Glu Leu
65 70 75 80

Gln Gln Arg Leu Glu
85

<210> 50
<211> 9
<212> PRT
<213> Unknown

<220>
<223> Exemplary Protein Sequence.

<220>
<221> MISC_FEATURE
<222> (8)..(8)
<223> Xaa can be any naturally occurring amino acid.

<400> 50

Gln Pro Ser Leu Phe Val Arg Xaa Ala
1 5

<210> 51
<211> 9
<212> PRT
<213> Unknown

USSN 10-731,875 - Thomas, et al. (9692-000029) Seq. Listing ST25

<220>

<223> Exemplary Protein Sequence.

<400> 51

Gln Pro Ser Val Phe Ile Arg Thr Arg
1 5

<210> 52

<211> 9

<212> PRT

<213> Unknown

<220>

<223> Exemplary Protein Sequence.

<400> 52

Gln Pro Ser Leu Phe Val Arg Thr Phe
1 5

<210> 53

<211> 9

<212> PRT

<213> Unknown

<220>

<223> Exemplary Protein Sequence.

<400> 53

Arg Pro Ser Val Tyr Val Arg Glu Gln
1 5

<210> 54

<211> 9

<212> PRT

<213> Unknown

<220>

<223> Exemplary Protein Sequence.

<400> 54

Arg Pro Ser Ala Tyr Ile Arg Glu Met
1 5

<210> 55

<211> 9

<212> PRT

<213> Unknown

<220>

<223> Exemplary Protein Sequence.

<400> 55

Arg Pro Ser Ile Phe Val Arg Glu Ser
1 5

<210> 56
<211> 9
<212> PRT
<213> Unknown

<220>
<223> Exemplary Protein Sequence.

<400> 56

Arg Pro Ser Leu Phe Val Arg Glu Trp
1 5

<210> 57
<211> 9
<212> PRT
<213> Unknown

<220>
<223> Exemplary Protein Sequence.

<400> 57

Arg Gly Ser Leu Phe Ile Trp Lys Ala
1 5

<210> 58
<211> 9
<212> PRT
<213> Unknown

<220>
<223> Exemplary Protein Sequence.

<400> 58

Arg Gly Val Val Phe Ile Trp Lys Arg
1 5

<210> 59
<211> 9
<212> PRT
<213> Unknown

<220>
<223> Exemplary Protein Sequence.

<400> 59

Arg Gly Pro Leu Phe Val Trp Lys Phe
1 5

<210> 60
<211> 9
<212> PRT
<213> Unknown

USSN 10-731,875 - Thomas, et al. (9692-000029) Seq. Listing ST25

<220>

<223> Exemplary Protein Sequence.

<220>

<221> MISC_FEATURE

<222> (5)..(5)

<223> Xaa can be any naturally occurring amino acid.

<400> 60

Arg Trp Lys Val Xaa Val Trp Asp Gln
1 5

<210> 61

<211> 9

<212> PRT

<213> Unknown

<220>

<223> Exemplary Protein Sequence.

<400> 61

Arg Trp Tyr Ala Tyr Ile Trp Asp Met
1 5

<210> 62

<211> 9

<212> PRT

<213> Unknown

<220>

<223> Exemplary Protein Sequence.

<400> 62

Arg Trp Glu Ile Phe Tyr Trp Asp Ser
1 5

<210> 63

<211> 9

<212> PRT

<213> Unknown

<220>

<223> Exemplary Protein Sequence.

<400> 63

Arg Trp Ile Leu Phe Val Trp Asp Trp
1 5